

**DECLARATION OF WYNN R. WALKER, Ph.D.**

I, WYNN R. WALKER, Ph.D., declare and state as follows:

1. I am a consultant in the field of irrigation and water resources engineering with over 30 years experience in surface irrigation design, management, and simulation. A current curriculum vitae detailing my qualifications and experience is attached to this declaration.
2. I have been retained by the Metropolitan Water District of Southern California (Metropolitan) to assist it in evaluating the amount of Colorado River water needed to satisfy reasonable and beneficial uses within the Imperial Irrigation District (IID).
3. My opinions, findings and conclusions concerning this matter are discussed in detail in the following attached reports entitled: Improving surface irrigation designs and management practices in the Imperial Valley, California; Effects of infiltration function on simulated leaching distributions in the Imperial Valley, California; and SIRMOD III - Surface irrigation simulation, evaluation, and design. Guide and technical documentation
4. The opinions, findings and conclusions detailed in the attached reports are based upon my own personal and professional knowledge of and expertise in the matters that are addressed and, if called as a witness, I could and would testify competently thereto.

I declare that the foregoing is true and correct and that this declaration was executed in Cache County, Utah on May 28, 2003.



WYNN R. WALKER, Ph.D.

Consultant to Metropolitan in the areas of computer modeling of on-farm water use



WYNN R. WALKER, Ph.D.

Consultant to Metropolitan in the areas of computer modeling of on-farm water use



## Resume

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### **Wynn R. Walker**

Associate Dean  
College of Engineering  
And

Professor

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### Education

B.S. Utah State University, Civil Engineering, 1969

M.S. Colorado State University, Civil Engineering, 1970

Ph.D. Colorado State University, Agricultural Engineering, 1973

### Professional Societies and Registration

American Society of Agricultural Engineers

American Society of Civil Engineers

U.S. Commission on Irrigation, Drainage and Flood Control

Professional Engineer (Utah) #22-152758-2202

### Academic Experience:

July 1, 2002 – Present	Associate Dean, College of Engineering and Professor, Department of Biological and Irrigation Engineering, Utah State University
November 1985 – June 30, 2002	Professor and Head, Department of Biological and Irrigation Engineering, Utah State University
October 1993 – January 2002	Professor of Liberal Arts and Sciences, Utah State University
March 1980 - November 1985	Associate Professor and Professor, Dept. of Agricultural and Irrigation Engineering, Utah State University
August 1970 - July 1980	Research Engineer, Assistant Professor, and Associate Professor, Department of Agricultural and Chemical Engineering, Colorado State University
March 1969 - August 1970	Research Engineer, Agricultural Engineering Department, Colorado State University

### Selected Professional Awards and Recognition

1984	Recipient of the Excellence in Research Award for the College of Engineering, Utah State University.
1991	Outstanding Research Paper Award, American Society of Civil Engineers, Irrigation and Drainage Division, "Real-Time Estimation of Furrow Infiltration, 116(3):299-318 - Co-authored by John D. Busman.
1994	Recipient of the D. Wynne Thorne Research Award from Utah State University.
2003	American Water Resources Association, Utah Section. Outstanding Service Award for Water Resources Education.

<i>Client</i>	<i>Description of Effort</i>
City of Aurora, Colorado	High altitude evapotranspiration measurements for water transfer litigation
Consolidated Sevier Bridge Reservoir Co.	Development of a water rights allocation model for the Sevier River system
Cornell University	Development of a "Best Management Practices" manual for mitigation of irrigation return flow quality on receiving waters
Instituto Agronómico Mediterráneo de Zaragoza, Spain	Lectures on surface irrigation
Instituto Nacional de Recursos Hidráulicos de la República Dominicana in	Test the feasibility of canal automation technologies in the Dominican Republic through a demonstration prototype system installed under local conditions and adapted to existing hydraulic and operational constraints
Inter-American Development Bank	Guyana sector adjustment loan analysis -- conditionalities for rehabilitation of irrigation and drainage systems, develop local man-power for a new central water authority, and assess the feasibility of privatizing substantial parts of the irrigation and drainage networks
	TOR for large scale technical assistance on privatization of public irrigation and drainage systems in the country
	Project design for the "Irrigation Management and Crop Diversification." Project in El Salvador
	Earthquake damage assessment in irrigation projects in El Salvador
	Project design for small scale irrigation developments in Nicaragua
Keller - Bliesner Engineering	Adapting time-variable inflow hydrograph to SIRMOD surface irrigation design, evaluation and simulation model
Land and Water Resources R&D Corporation and National Centre for Engineering in Agriculture, University of Southern Queensland, Queensland	Improving the efficiency of water supply systems, their integration with on-farm distribution systems, and related infrastructure issues
Louis Berger International	Analysis and design of computer-assisted canal management system for the Tungabhadra Project in Karnataka State, India
Metropolitan Water District of Southern California	Analysis of agricultural to urban water transfers from the Imperial Valley
South African Directorate of Irrigation. Engineering.	Evaluation of surface irrigation problems Southern Africa
Technion - Israel Institute of Technology	Evaluation of irrigation technology migration and impacts on efficiency, uniformity, and productivity

U. N. Food and Agricultural Organization

Short course on trickle and sprinkle irrigation in Amman, Jordan

Evaluation of irrigation practices for date palm in water short areas of Western India

FAO Irrigation and Drainage Paper 45, a practical guide for designing and evaluating surface irrigation systems with particular emphasis on conditions in developing countries

Short course on trickle and sprinkle irrigation in Baghdad, Iraq

United Nations Development Program

Develop the irrigation engineering cell for a "systems engineering unit" with the Indian Central Water Commission

Transfer of main systems models to the Central Soil Salinity Research Institute, Karnal, India

Evaluation of the International Waterlogging and Salinity Research Institute (IWASRI) in Lahore, Pakistan

University of Minnesota

Developing an irrigation engineering faculty for the Dept Génie Rural, IAV Hassan II, Morocco

US Agency for International Development

Formulation of a "watercourse command area model" in the Punjab of Pakistan to forecast the aggregate water demands by all the fields lying below a control point in the canal distribution system

Evaluation of alternative irrigation practices for remote oasis sites in Mauritania

Evaluation of irrigation and groundwater management options as part of a project identification team for a proposed Bluchistan Area Development Project

Design team for the Maharashtra Minor Irrigation Project in India

Team Leader for design team for the Indonesian Small-Scale Irrigation Project

Design of supervisory control system for the automation of the Tungabhadra HL Canal in Karnataka State  
On-farm irrigation system design and evaluation policies and practices in Spain (NATO Project)

US Bureau of Reclamation

US Environmental Protection Agency

National Water Management Workshop lectures  
Evaluation of irrigation return flow simulation models, documentation, and utilization

<u>Funding Agency</u>	<u>Project Title</u>	<u>Award</u>	<u>Dates</u>
U.S. Environmental Protection Agency	Assessment of USBR Irrigation Return Flow Models	\$15,679	12/74-6/75
National Science Foundation	A Systematic Procedure for Taxing Agricultural Pollution Sources	\$17,182	4/74-9/75
Office of Water Research and Technology, U.S. Department of Interior	Coordinating Water Management and Energy Development in the Upper Colorado River Basin	\$90,335	12/74-2/77
U.S. Environmental Protection Agency	Integrating Desalination and Agricultural Salinity Control Technologies	\$36,850	7/75-7/77
U.S. Environmental Protection Agency	Identification and Initial Evaluation of Irrigation Return Flow Models	\$14,845	6/76-11/77
U.S. Environmental Protection Agency	Assessing the Spatial Variability of Irrigation Water Applications	\$30,465	10/76-9/77
U.S. Environmental Protection Agency	Irrigation and Ground-water Management for Land Application of Animal Wastes	\$502,540	10/76-2/80
U.S. Environmental Protection Agency	Evaluating Furrow Irrigation Efficiency for Regional Water Quality Plans	\$187,034	4/78-3/80
U.S. Environmental Protection Agency	Optimizing Salinity Control Strategies for the Upper Colorado River Basin	\$50,682	9/78-9/80
Argonne National Lab., U.S. Department of Energy	Studies of Heat Transfer and Water Migration in Soils	\$60,000	5/79-6/80
Snake River Conservation Research Center, USDA-ARS	Water and Energy Efficiencies Under Surge Flow Irrigation Systems	\$44,100	5/81-9/83
U.S. Water Conservation Laboratory, USDA-ARS	Level-Basin Irrigation and Surge Flow	\$5,000	4/83-9/83

<u>Funding Agency</u>	<u>Project Title</u>	<u>Award</u>	<u>Dates</u>
U.S. Agency for International Development	Irrigation Systems Engineering	\$146,905	10/83-9/84
U.S. Agency for International Development	Water Management Synthesis II Project -- Main Systems Management Special Studies	\$502,310	10/84-3/88
Snake River Conservation Research Center, USDA-ARS	Soil Structure and Porosity Effects on Furrow Infiltration	\$295,386	10/86-3/88
Bureau of Reclamation, U.S. Dept. of Interior	Water Rights Allocation in the Sevier River Basin	\$70,000	9/86-6/90
Central Utah Water Conservancy District	Expansion of SEVIER Model to Include Circle Valley, Utah	\$11,200	10/89-9/90
Bureau of Reclamation, U.S. Dept. of Interior	Software Development for Irrigation Systems in Egypt	\$715,869	7/90-12/90
US Agency for International Development	Cooperative Agreement for Testing Irrigation Software in Egypt	\$591,000	5/92-3/94
Bureau of Reclamation, U.S. Dept. of Interior	Low-cost Adaptive Canal Automation for Conserving Water and Maximizing Delivery System Flexibility	\$257,249	4/94 - 9/95
Bureau of Reclamation, U.S. Dept. of Interior	Development of a General Purpose Monitoring and Control System for Automated Water Systems.	\$10,000	10/92-9/94
World Bank and Government of Ecuador	Ecuador Irrigation Technical Assistance Project	\$4,401,700	10/94 - 6/30/01
Bureau of Reclamation, U.S. Department of Interior	Ashley and Brush Creek Computerization	\$148,000	3/31/96 - 6/30/98
Northern Juab Irrigation District	WATERS Software Implementation	\$4,070	2/10/99 - 12/31/99
Sevier River Water Users Association	Sevier River Water Resources Management	\$150,000	11/18/99 - 11/17/02
	WATERS Software Implementation	\$4,070	8/9/00 - 8/8/01

**Selected Funded Research Awards*****Wynn R. Walker Page R-3***

<b><u>Funding Agency</u></b>	<b><u>Project Title</u></b>	<b><u>Award</u></b>	<b><u>Dates</u></b>
Buffalo Rapids Irrigation District	Implementation		
	WATERS Software	\$4,070	2/10/00 – 2/9/01
Fort Shaw Irrigation District	Implementation		
	Acuedro de Cooperación	\$498,540	1/27/00 – 12/31/00
Instituto Nacional de Recursos Hidráulicos de la República Dominicana			
	Telecommunications and Information Infrastructure Assistance, -- SIVIER III	\$150,000	10/1/2000 -- 9/30/2002
Sevier River Water Users Association and U.S. Department of Commerce	Water Rights Allocation		
		\$1,712,688	3/1/01 – 2/27/04
US Agency For International Development	Development of a World Irrigation Information Network, <i>Irri-Net</i>		

- Walker, W.R. 1980. "Sprinkler and Trickle Irrigation." Study Guide, copyrighted and published by Colorado State University, Engineering Renewal and Growth, Fort Collins, Colorado.
- Walker, W.R. and G.V. Skogerboe. 1987. Surface Irrigation: "Theory and Practice". Prentice-Hall Inc., Englewood Cliffs, New Jersey. 386 pp.
- Walker, W.R. 1989. "Guidelines for Designing and Evaluating Surface Irrigation Systems." Irrigation and Drainage Paper 45, Food and Agriculture Organization of the United Nations, Rome, Italy. 137 pp.
- Walker, W. R. 2001. "SIRMOD II – Surface Irrigation Simulation, Evaluation, and Design. User's guide and technical documentation. Biological and Irrigation Engineering. Utah State University, Logan, Utah. 63 p.
- Walker, W. R. 2002. "SIRMOD III -- Simulación, Diseño y Evaluación de Riego por Superficie, Versión Multilingüe, Guía del Usuario y Documentación Técnica. Biological and Irrigation Engineering. Utah State University, Logan, Utah. 73 p.
- Walker, W. R. 2002. "SIRMOD III -- оделирование, Оценка и Расчет Поверхностного Орошения, Многоязычная версия, Руководство для Пользователя и Техническая Документация. Biological and Irrigation Engineering. Utah State University, Logan, Utah. 70 p.



**Student****Research Topic**

Jorge Stember Torres (MS, 1975)	An Analysis of Using Pan Evaporation Data for Estimating Potential Evapotranspiration
Nguyen Van Ni (MS, 1976)	An Analysis of Irrigated Soil Evaporation Losses
Larry D. Goehring (MS, 1976)	Optimization of Trickle Irrigation System Design
Marshall Flug (PhD, 1977)	Optimal Energy-Water-Salinity Strategies in the Upper Colorado River Basin
LeRoy J. Salazar (MS, 1977)	Spatial Distribution of Applied Water in Surface Irrigation
Mohammad S. Zarabi (MS, 1977)	Principles of Irrigation Scheduling
J.H.L.M. Gerards (PhD, 1978)	Predicting and Improving Furrow Irrigation Efficiency
Wiboon Boonyatharokul (PhD, 1979)	Irrigation Scheduling Soil Moisture Stress Model
Bruce E. Kroeker (MS, 1980)	Managing Animal Waste Impacts on Groundwater Quality Under Irrigated Conditions
Robert G. Evans (PhD, 1980)	Optimizing Salinity Control Strategies in the Upper Colorado River Basin
Martin E. Neff (MS, 1980)	Cost-Effectiveness of Alternative Furrow Irrigation Evaluation Procedures
Simon P. Espinosa (MS, 1981)	Simulating Effective Thermal Conductivities in Partially Saturated Soils
Robert A. Beggs (MS, 1981)	A Portable Field Sprinkling Infiltrometer
Charles W. Binder (MS, 1981)	Improving Furrow Irrigation Performance through Management Decision
Martin A. Sailus (MS, 1981)	Trickle Irrigation Subunit Uniformity
Teang Shui Lee (MS, 1982)	Kinematic-Wave Simulation of Furrow Advance and Recession
Hector M. Malano (MS, 1982)	Comparison of the Infiltration Processes Under Continuous and Surge Flow
Behroz Mostatazadehfard (MS, 1982)	Furrow Geometry and Roughness Under Surge and Continuous Flow
Boubker Essafi (MS, 1983)	A Recursive Volume Balance Model for Continuous and Surge Flow Irrigation
Gary P. Merkley (MS, 1983)	Semi-Graphical Design for Furrow Irrigation System Using a NonDimensional Kinematic-Wave Model

Theib J. Oweis (PhD, 1983)	Surge Flow Furrow Irrigation Hydraulics with Zero-Inertia
Donald K. Frevert (PhD, 1983)	Prediction of Irrigation Return Flow
Clarence J. Prestwich (MS, 1983)	Conventional, Surge, and Sprinkle Irrigation System in Flowell, Utah - A Comparison
J. Antonio Forcro S. (PhD, 1983)	Optimal Management of Furrow Irrigation Systems
Nairn Haie (PhD, 1983)	Hydrodynamic Simulation of Continuous and Surged Surface Flow
Charles S. Chen (MS, 1984)	Performance Evaluation Comparison of Surge Flow, Continuous Flow and Center-Pivot Irrigation Systems
Ali Gharbi (MS, 1984)	Effect of Flow Fluctuations on Free Draining and Sloping Furrow and Border Irrigation Systems
Don V. Anderson (MS, 1984)	An Economic Comparison of Reservoir Construction and Long Term Supplemental Pumping for the Callao Irrigation Company
Behroz Mostafazadehfard (PhD, 1985)	Furrow Hydraulics with Two-Dimensional Infiltration
Rachid Abdelloui (PhD, 1985)	Irrigation System Design Capacity for "On-Demand" Operation
Francis N. Gichuki (MS, 1985)	Hydraulics of Surge Flow Cutback
Willem F. Vlotman (PhD, 1985)	Soil Moisture Measurement With VHF Radio Waves
Amala Jayasekara (MS, 1985)	Potential of Using Satellite Remote Sensing Systems for Appraisal and Management of Irrigation Systems
Amala Jayasekara (PhD, 1987)	Potential of LANDSAT Data in Appraising and Managing an Irrigation Project
Jair De Costa Oliveria Filho (MS, 1987)	Parameter Sensitivity Analysis for the Hydrodynamic, ZeroInertia, and Kinematic-wave Hydraulic Models
Andrew A. Keller (PhD, 1987)	Modeling Command Area Demand and Response to Delivered by Main System
Francis N. Gichuki (PhD, 1988)	Development of a Branching Canal Network Hydraulic Network Model-
Gary P. Merkley (PhD, 1988)	Hydraulic Modeling Applications in Main System
Hubert Eisele (PhD, 1988)	Modeling Main System Water Allocation Under Various Allocation Procedures
Abdelwahab Filali (PhD, 1990)	Systems Analysis of an Irrigation Main Systems
Seigo Yamashita (MS, 1990)	Calibration and Validation of the USU Unit Command Area Model

Antonius G. Segeren (PhD, 1990)	The Effect of Soil Surface Sealing on Infiltration in Furrows
Carlos A. V. Azevedo (PhD, 1991)	Real-time Solution of the Inverse Furrow Advance Problem
Byeong-Ho Cheong (PhD, 1992)	Improving Irrigation System Performance for Rice Culture
Boubker Essafi (PhD, 1993)	Modeling Reservoir Systems Operations for Irrigation Purposes
Heinen V. Patel (MS, 1994)	Canal Automation: A General Review
Edmar José Scaloppi (PhD, 1986)	Two-Dimensional Soil-Water Flow and Solute Transport Simulation in Surface Irrigation
Maria Gloria Romero (MS, 2000)	Drainage Problems in Heavy Soils Under Irrigation
Musa Vusie Dlamini (MS, 2001)	Evaluation of Furrow Shapes on Intake Characteristics
Jodi Gardberg (MS, In Preparation)	Chemigation in Surface Irrigation Systems
Nallan Chakaravartulre (MS, In Preparation)	Simulation of Blocked-End Border Design Parameters
Vibhuti Pandey (MS, 2002)	Multi-Compartmented Land Leveling Design
Anthony Steinfeldt (MS, In Preparation)	Canal Organization and Management for Improved Efficiency and Delivery

- Walker, W.R. 1970. Hydro-Salinity Model of the Grand Valley. M.S. Thesis, Civil Engineering Department, Colorado State University, Fort Collins, Colorado. August.
- Walker, W.R. and G.V. Skogerboe. 1971. Agricultural Land Use in the Grand Valley. Report AER71-72 WRW-GVSI, Agricultural Engineering Department, Colorado State University, Fort Collins, Colorado. July.
- Skogerboe, G.V., R.S. Bennett and W.R. Walker. 1972. Installation and Field Use of Cutthroat Flumes for Water Measurement. Water Management Technical Report No. 19. Agricultural Engineering Department, Colorado State University, Fort Collins, Colorado. March.
- Walker, W. Roger and W.R. Walker. 1972. Surviving with Salinity in the Lower Sevier River Basin. Paper presented at the National Conference on Managing Irrigated Agriculture to Improve Water Quality, Grand Junction, Colorado. May.
- Walker, W.R. 1972. Conveyance and Distribution System Lining for Salinity Control. Paper presented at the 1972 Specialty Conference. Irrigation and Drainage Division, ASCE. Spokane, Washington. September.
- Skogerboe, G.V. and W.R. Walker. 1972. Evaluation of Canal Lining for Salinity Control in the Grand Valley. Report 13030 DOA01-72. U.S. Environmental Protection Agency, Washington, D.C. October.
- Skogerboe, G.V., R.S. Bennett and W.R. Walker. 1972. Generalized Discharge Relations for Cutthroat Flumes. Irrigation and Drainage Division, ASCE, 98(IR4):569-583.
- Walker, W.R. and G.V. Skogerboe, and R.S. Bennett. 1973. Flow Measuring Flume for Wastewater Treatment Plants. Journal of Water Pollution Control Federation, 45(3):542-551.
- Walker, W.R. and G.V. Skogerboe. 1973. Mathematical Modeling for Water Management Strategies in Urbanizing River Basins. Technical Completion Report, Office of Water Resources Research, U.S. Department of the Interior. June.
- Walker, W.R., R.C. Ward, and G.V. Skogerboe. 1973. Evaluation of Water Management Policies in the Denver Metropolitan Area. Technical Completion Report, Office of Water Resources Research, U.S. Department of the Interior. June.
- Walker, W.R., T.L. Huntzinger, and G.V. Skogerboe. 1973. Coordination of Agricultural and Urban Water Quality Management in the Utah Lake Drainage Area. Technical Completion Report, Office of Water Resources Research, U.S. Department of the Interior. June.
- Walker, W.R., G.V. Skogerboe, R.C. Ward and T.C. Huntzinger. 1973. Institutional Requirements for Optimal Water Quality Management in Arid Urban Areas. Technical Completion Report, Office of Water Resources Research, U.S. Department of the Interior. June.
- Skogerboe, G.V., J.W.H. Barrett, L.H. Austin, and W.R. Walker. 1973. Comparison of Bridge Backwater Relations. J. Hydraulics Division, ASCE, 99, (HY6):921-938.
- Skogerboe, G.V. and W.R. Walker. 1973. Salt Pickup from Agricultural Lands in the Grand Valley, Colorado. ASA, J. of Environmental Quality, 2(3):377-382.
- Skogerboe, G.V. and W.R. Walker. 1973. Culverts for Flow Measurements in Irrigation Systems. Transactions of ASAE, 16(2):287-293.
- Walker, W.R. 1973. Mathematical Modeling of Urban Water Management Strategies. Ph.D. Dissertation. Agricultural Engineering Department, Colorado State University, Fort Collins, Colorado. August.

- Walker, W.R. and G.V. Skogerboe. 1973. The Impact of Water Quality Objectives on Urban Water Supply Planning. AWR, Water Resources Bulletin, 9(5):861-874.
- Walker, W.R., G.V. Skogerboe, and T.L. Huntzinger. 1974. Optimal Allocation of Water Quality Controls in Urbanizing River Basins. AWR, Water Resources Bulletin, 10(5):845-859.
- Walker, W.R., G.V. Skogerboe, and R.C. Ward. 1974. Water Supply, Treatment, Distribution, and Reuse Optimization in Arid Urban Areas. AWR, Water Resources Bulletin, 10(6):1187-1197.
- Smith, S.W. and W.R. Walker. 1975. Annotated Bibliography on Trickle Irrigation. Environmental Resources Center Information Series Report No. 16. Colorado State University, Fort Collins, Colorado. June.
- Walker, W.R. and G.V. Skogerboe. 1975. An Implicit Approach to Pricing Agricultural Water Transfers to Urban Uses. AWR, Water Resources Bulletin Vol. 11(4):751-758. August.
- Walker, W.R. 1975. A Systematic Procedure for Taxing Agricultural Pollution Sources. Final Report to National Science Foundation, Washington, D.C. October.
- Walker, W.R. 1976. Integrating Desalination and Agricultural Salinity Control Technologies. Paper presented at International Conference on Managing Saline Water for Irrigation. Texas Tech University, Lubbock, Texas. August 16-20, 1976.
- Walker, W.R. 1976. Assessment of Irrigation Return Flow Models. Environmental Protection Technology Series Report EPA-600/2-76-219. Robert S. Kerr Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Ada, Oklahoma. October.
- Walker, W.R. 1977. Combining Agricultural Improvements and Desalination of Return Flows to Optimize Local Salinity Control Policies. Proceedings of the National Conference of Irrigation Return Flow Quality Management. J.P. Law and G.V. Skogerboe, ed. May.
- Walker, W.R. 1977. Modeling the Irrigation Return Flow System--Current Capabilities and Future Needs. Proceedings of the National Conference on Irrigation Return Flow Quality Management. J.P. Law and G.V. Skogerboe, ed. May.
- Walker, W.R., G.V. Skogerboe and R.G. Evans. 1977. Development of Best Management Practices for Salinity Control in Grand Valley. Proceedings of the National Conference on Irrigation Return Flow Quality Management. J.P. Law and G.V. Skogerboe, ed. May.
- Radosevich, G.E., G.V. Skogerboe, D.B. McWhorter and W.R. Walker. 1977. Salinity Management Alternatives for Oil Shale Water Supplies. Natural Resources Journal, 17(3):461-475.
- Flug, M., W.R. Walker, G.V. Skogerboe and S.W. Smith. 1977. The Impact of Energy Development on Water Resources in the Upper Colorado River Basin. Final Report No. C-6076, Office of Water Research and Technology, U.S. Department of the Interior. Washington, D.C. August.
- Smith, S.W. and W.R. Walker. 1977. To Grow Food in Home Gardens. Agricultural Engineering, 58(8):21-22.
- Karmeli, D., L.J. Salazar and W.R. Walker. 1978. Assessing the Spatial Variability of Irrigation Water Applications. Report No. EPA-600/2-78041, Robert S. Kerr Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency. Ada, Oklahoma. March.
- Walker, W.R. 1978. Integrating Desalination and Agricultural Salinity Control Alternatives. Report No. EPA-600/2-78-

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- Walker, W.R., G.V. Skogerboe and R.G. Evans. 1979. Reducing Salt Pickup from Irrigated Lands. J. Irrigation and Drainage Division, ASCE 105(IR1): 1-14.
- Walker, W.R., G.V. Skogerboe and R.G. Evans. 1979. Optimization of Salinity Control in Grand Valley. J. Irrigation and Drainage Division, ASCE. 105(IR1):15-28.
- Skogerboe, G.V., W.R. Walker and R.G. Evans. 1979. Environmental Planning Manual for Salinity Management in Irrigated Agriculture. EPA-600/2-79062. Robert S. Kerr Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Ada, Oklahoma. March.
- Walker, W.R. 1979. Explicit Sprinkler Irrigation Uniformity - Efficiency Model. J. Irrigation and Drainage Division, ASCE, 105(IR2), 129-136.
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- Flug, M., W.R. Walker and G.V. Skogerboe. 1979. Energy-Water-Salinity: Upper Colorado River Basin. J. Water Resources Planning and Management Division, ASCE, 105(WR2):305-316.
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- Walker, W.R., G.V. Skogerboe and R.G. Evans. 1979. Developing Best Management Practices for Salinity Control in Grand Valley, Colorado. Water Resources Research, 15(5):1073-1080.
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- Walker, W.R., J.D. Sabey and D.R. Hampton. 1980. Studies of Heat Transfer and Water Migration in Soils. Report DE-AC02-79CS 30139. U.S. Department of Energy, Argonne National Laboratory, Argonne, Illinois. November.
- Evans, R.G., W.R. Walker and G.V. Skogerboe. 1980. Optimizing Salinity Control Strategies for the Upper Colorado River Basin. EPA Grant No. R-806148. U.S. Environmental Protection Agency, Ada, Oklahoma. December.
- Walker, W.R. and G.V. Skogerboe. 1981. Evaluating Furrow Irrigation Systems for Regional Water Quality Planning. EPA Grant No. 805811. U.S. Environmental Protection Agency. Ada, Oklahoma. January.
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- Bishop, A.A., N. Allen, G. Poole and W.R. Walker. 1981. Surge Flow Furrow Irrigation. J. Irrigation and Drainage Div., ASCE, 107(IR3):251-264.
- Walker, W.R., J.C. Henggeler and A.A. Bishop. 1981. Effect of Surge Flow in Level Basins. Paper 81-2555, ASAE Winter Meeting, Chicago, Illinois. December.
- Coolidge, P.S., W.R. Walker and A.A. Bishop. 1982. Advance and Runoff Surge Flow Furrow Irrigation. J. Irrigation and Drainage Div., ASCE, 108(IR1): 1-16.

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- Evans, R.G., and W.R. Walker and G.V. Skogerboe. 1982. Optimal Salinity Control Program for the Upper Colorado River Basin. *J. Water Supply and Management*, ASCE, 6 (1-2):169-197.
- Flug, M., W.R. Walker and G.V. Skogerboe. 1982. Impact of Energy Development upon Water and Salinity in the Upper Colorado River Basin. *J. Water Supply and Management*, ASCE. 6(102):199-220.
- Elliott, R.L. and W.R. Walker. 1982. Field Evaluation of Furrow Infiltration and Advance Functions. *Trans. ASAE*, 25(2):396-400.
- Kundu, S.S., G.V. Skogerboe and W.R. Walker. 1982. Using a Crop Growth Simulation Model for Evaluating Irrigation Practices. *J. Agricultural Water Management*, 5:253-268.
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